UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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NEW YORK, NY 10007-1866

MEMORANDUM

DATE: November 12, 1998

SUBJECT: National Remedy Review Board Recommendations -
Welsbach/General Gas Mantle Superfund Site

FROM: John S. Frisco, Manager John S Frisco
Superfund Remedial Program

TO: Bruce K. Means, Chair
National Remedy Review Board

I am writing in regard to the advisory recommendations provided by the National Remedy Review Board regarding the remedy proposed by the region for the Welsbach/General Gas Mantle site in Camden County, New Jersey. The board's comments were contained in your memorandum, dated October 27, 1998.

The region's proposed remedial alternative involves the removal of radiological contamination from residential, commercial and public properties which comprise the Welsbach site. The proposal also includes the restoration of the affected properties. Excavated materials will be transported to appropriate off-site facilities for disposal.

The board provided two comments on the region's proposed remedy. The first dealt with program expectations to treat principal threat wastes wherever practicable, while containing lower-level threats because treatment of such wastes may not be cost effective or practicable. The second comment addressed the remedial action objectives (RAOs), particularly the goal to minimize human exposure to gamma radiation greater than 15 millirems per year (mrem/yr).

In response to the board's first comment, the region acknowledges the National Contingency Plan program expectation to treat principal threat wastes. Unfortunately, unlike the chemical contaminants found at most Superfund sites, the radiological contamination at the Welsbach site does not lend itself to treatment. Some years ago, in connection with a similar Superfund cleanup in northern New Jersey, the region working with ORD participated in the development of a process to try to separate the more highly-contaminated radiological particles from a soil matrix (i.e., VORCE). A second technology was subsequently developed by the private sector with the same goal called the Segmented Gate System (SGS). Unfortunately, the testing of site soils indicated that neither technology could achieve the required cleanup goals. At the present time, there remains no known technology capable of treating the radioactive contamination. Consequently, waste removal represents the only viable remedy for the Welsbach site.

In its second comment, the board recommends that the region clarify the basis of the RAOs for the site. OSWER Directive No. 9200.4-18, issued in August 1997, identifies the 15 mrem/yr total effective dose equivalent criteria as the maximum dose limit for human exposure to gamma radiation. This level equates to a three in ten thousand increased carcinogenic risk which is consistent with levels considered protective and with guidance and regulations developed by EPA for radiation control programs. Thus, the region identified this criteria as an appropriate RAO for the site. In February 1998, OSWER Directive No. 9200.4-25 addressed the use of the soil cleanup criteria in 40 CFR 192 (Standards for Cleanup of Land and Buildings Contaminated with Residual Radioactive Materials from Inactive Uranium Processing Sites) as remediation goals for CERCLA sites. This directive specifies the 5 picoCuries per gram (pCi/g) soil cleanup level for combined radium and thorium series radionuclides, also identified by the region as an RAO for the site. As explained at the board meeting, the region is currently involved in cleaning up other Superfund sites with radiological contamination in New Jersey. It should be noted that the RAOs for the Welsbach site are similar to those selected for these other sites. The region agrees with the board recommendation and will ensure that the site decision documents clearly describe the basis for the RAOs.

In closing, the region appreciates the advice and recommendations provided by the board in connection with its review of the proposed remedy for the Welsbach/General Gas Mantle site.

If you have any questions, please do not hesitate to contact me.